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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/507,251

09/10/2004

Tetsuya Fudaba

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EXAMINER

NUTTER, NATHAN M

ART UNIT

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1796

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/507,251	Applicant(s) FUDABA ET AL.	
	Examiner Nathan M. Nutter	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 13-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Response to Amendment

In response to the amendment filed 20 May 2010, the following is placed in effect.

The Examiner notes the discrepancy of claims pending in the prior rejection made under 102(b) over Tanaka et al. Counsel is correct in that only claims 13-24 remain pending.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 19-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The concept where copolymer (B-2) possesses a blockness (CSD) of "greater than 0 and equal to or less than 0.8," as recited in instant claims 19 and 23. Only the range of "less than 0.8" is supported by the Specification, as originally filed.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 13-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Tanaka et al (US 6,191,219).

The reference to Tanaka et al teaches the manufacture of a polypropylene composition, comprising claimed component (A) 50-95 parts by weight polypropylene component that may include propylene homopolymers or copolymers thereof with α -olefins, herein the α -olefin content is “preferably 8 mole % or less.” Note column 2 (lines 40-60) and column 2 (lines 52-64). The α -olefins disclosed embrace the C₄₋₁₂ range recited. The patent component (A) corresponds to Applicant's component (A), herein. The composition further comprises as component (B) 3 to 40 parts by weight an ethylene/ α -olefin copolymer having an ethylene content of 60-95 mole %, and a molecular weight distribution (Mw/Mn) determined by gel permeation chromatography “of 3 or less.” Note column 1 (lines 48-65) and column 3 (lines 26-53). This corresponds to Applicant's component (B-2). The composition also comprises as component (C), 2-20 parts by weight of a propylene/ethylene/1-butene copolymer, wherein the propylene content embraces the herein claimed 50-85 mole %. This component corresponds to the instantly claimed (B-1) component. Note column 6 (lines 24-42).

The reference to Tanaka et al is silent as to the viscosity ratios as to components (A), (B) and (C). The viscosity range disclosed for the component (B), (B-2) herein, is 0.5 to 5.0 dl/g at column 4 (lines 47-50) and is identical to that disclosed at paragraph [0027] for viscosity for Applicants component B2. Viscosity is an inherent function of molecular weight and molecular weight distribution for polymers of the same chemical composition and can be also characterized by melt flow rate (MFR). Tanaka et al disclose at column 3 (lines 19-22) a MFR range for component A as low as 0.1 with a preferable upper limit of 50 g/10min, which fully encompasses range of 0.3 to 15 g/10 min, disclosed by Applicant at paragraph [0017], at column 2 (lines 34-37) a MFR range for component B (B-2) of from 0.5 to 10 g/10 min., and at column 6 (lines 60-64) a MFR for component C (B-1) is from 0.1 to 10 g/10 min. As such, the viscosity ranges and ratios determined by MFR or by actual viscosity measurement would be within the ranges recited in the instant claims. The burden shifts to applicants to show the contrary by presenting factual comparative results.

The reference also teaches at column 4 (lines 1-46) a "parameter (B-value) for the randomness of chain distribution of monomeric units in the copolymer" for component (B), (B-2) herein, which may embrace that recited herein. The B-value, which is to CSD or blockness, may be in the range from 0 to 2. Note column 4 (lines 38-42). "The B-value equals 2, when both the comonomer units are ideally alternating in the ethylene/ α -olefin random copolymer, and equals to zero, when both the comonomer units are present in the copolymer as ideal block-copolymer by being completely

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separately polymerized." The disclosure of the range of B-value disclosed by Tanaka et al is deemed to anticipate the range of "blockness (CSD) of 0.8 or less" claimed herein.

The presence of the "heterologous bond" recited herein would be an inherent property of all propylene copolymers and depend on the catalyst systems and polymerization conditions employed. Tanaka et al disclose the presence and importance of this type of microstructure. Note column 7 (lines 45-65).

Although Tanaka et al are silent regarding the stereoregularity of component A recited herein, stereoregularity is deemed an inherent property of the polypropylene component and depends on the catalyst systems and polymerization conditions employed in the manufacture of a particular propylene polymer. Because Tanaka et al disclose for component (A) a polypropylene resin produced with solid titanium or metallocene catalysts, as applicant employs. Note column 3 (lines 5-10). Since the same catalysts may be employed, it would be expected the degree of stereoregularity would be identical for both polymers.

The reference is also silent regarding the morphology, particularly about layers or needles, in specific sizes and aspect ratios, of films obtained from the composition. Again, the phase morphology would be inherent in the composition and would depend on compatibility and the compositional limitations of the constituents. Since nothing is shown on the record or recited in the claims as to some difference in the constituents or compositional limitations, and nothing is shown on the record regarding any specific production technique, the properties of phase morphology would be inherent. Burden

shifts to the Applicant to provide factual evidence to the contrary. Finally, the title of the patent is indicative of the use thereof for superior non-stretched (good mechanical properties), transparent and impact resistant film.

Response to Arguments

Applicant's arguments filed 20 May 2010 have been fully considered but they are not persuasive.

With regard to the rejection of claims 19-24 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement, applicants contend that the (B-2) polymer "possesses a blockness (CSD) of range of 'greater than 0 and equal to or less than 0.8'" though not presented *in haec verba*. The phrase does not appear in the Specification, as originally filed, admittedly. The phrase that is disclosed at page 4 (lines 24-27) is "or less" which holds "0" as a lower limit. To establish a new limit e.g. "greater than zero" does not provide a lower limit that has been taught by the Specification. Applicants cannot arbitrarily pick an undisclosed end-point for a range.

With regard to the rejection of claims 13-24 under 35 U.S.C. 102(b) as being anticipated by Tanaka et al (US 6,191,219), applicants argue the reference fails to teach the specific monomer weight percents for the (B-2) copolymer. This is not accurate. The monomer contents overlap at 50-85% by weight propylene monomer with 15-30% by weight ethylene at column 6 (lines 24-42) which satisfies the limitations of the claims, as rejected. Applicants contend the polymer of the reference is excluded by the instant

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claims since the claims now recite “consisting of.” The claims recite the closed term “consisting of” without predicating such with a full description thereof, a disclosure thereof, or any clear examples of the limitations excluding all non-recited elements in the Specification as originally filed. Since the term is construed as definitely excluding therefrom any element or ingredient not specified therein, it is incumbent upon applicant to substantiate support for this recitation. Admission that the Specification includes all recited constituents separately is not deemed sufficient. The components must be shown used together.

All prior arguments of record are maintained below.

With regard to the rejection of claims 13-24 under 35 U.S.C. 102(b) as being anticipated by Tanaka et al (US 6,191,219), applicants argue “new claims 13-24 recite copolymer (B-1) is a propylene copolymer with ethylene wherein the copolymer comprises from more than 50% by weight to 85% by weight propylene.” Those limitations are certainly met by the reference, as pointed out above. There is no requirement as to the content limitations there may be on the ethylene constituent, only that it is present. It is noted that a copolymer may comprise three units, and be referred to as a copolymer. This is only a matter of semantics and will not be addressed as to merit. The claim recitation for this polymer (B-1) fails to exclude other monomers. As such, applicants have failed to differentiate this constituent over that taught by the reference.

Applicants further contend the reference fails to teach the viscosity ratios of the components, as claimed. This aspect of the reference composition would be inherent,

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as pointed out above, thereby providing the identical advantages of the composition of applicants' claims. Once a reference teaching a product appearing to be substantially identical is made the basis of a rejection and the examiner presents evidence or reasoning tending to show inherency, the burden shifts to the applicant to show an unobvious difference. In re Fitzgerald, 619 F.2d 67, 70, 205 USPQ 594, 596 (CCPA 1980). In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433-34 (CCPA 1977). In re Schreiber, 128 F.3d 1473, 1478, 44 USPQ2d 1429, 1432 (Fed. Cir. 1997). Applicants have provided no comparative showings or other convincing evidence to establish unexpected results.

Applicants further opine the reference to Tanaka et al fails to show the B-value as herein recited as blockness. The Examiner has pointed out why the reference clearly teaches the range of from zero to two. Nothing more is necessary to anticipate this parameter. Applicants cannot rely upon preferred embodiments or isolated examples to negate the teachings of the reference. The reference is viewed in its entirety, not as to isolated passages or other singular statements. Preferred and "ideal" embodiments do not dictate the metes and bounds of the reference. Applicants' arguments concerning theoretical aspects of the reference fall short in view of what the reference discloses in its entirety. Applicants argue a difference related to the blockness value, but, again have failed to show any comparative data or other convincing evidence to establish such alleged patentability.

As to the prior Examiner's reliance upon the use of the document, "Polypropylene" by R. Lieberman et al, this reliance is not improper. The reference is

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employed solely to establish what is known fact, not as a crutch to deny patentability to the claims. The reference is relied upon for the reasons set out in the prior action and repeated herein below. The reference is not relied upon as the basis for the rejection as presented above.

The reasoning provided is repeated below.

Applicant requested the Examiner provide evidence to support the statement:

"Viscosity is an inherent function of molecular weight and molecular weight distribution for polymers of the same chemical composition and can be also characterized by melt flow rate (MFR)."

Evidence can be found in article of R. Lieberman et al. "Polypropylene" at pages 529 and 530:

"Polymer Chain Length Control. The length of the polymer chain has a significant impact on its performance, particularly its flowability. This is a critical parameter for downstream use of the resin. Direct measurement of the polymer chain is difficult and not suited to plant laboratories. Instead, polymer chain length is measured indirectly in several ways. For many years, the intrinsic viscosity (IV) of the polymer was measured. IV results were directly proportional to polymer chain length. That is, the higher the IV, the longer the average chain length.

While still used to some extent during the production of impact copolymers, intrinsic viscosity has been replaced with the much quicker and more repeatable melt flow rate

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(MFR). As the term implies, MFR is the weight of melted polymer that can flow through a specific orifice, under a standard load, at a given temperature and time.

Standard load = 2.16 kg

Standard temperature = 230°C (for very high MFR products, a lower temperature is used)

Standard time = 10 minutes

As would be expected, MFR results are the inverse of chain length. That is, polymers with long chain length will have a low MFR.

With the development of automated testing machines in the late 1970's, polymer MFR can be measured quickly with high accuracy and repeatability.

Hydrogen is added to the polymerization reaction to control the molecular weight (ie, chain length) of the polymer by acting as a chain-transfer agent. Hydrogen increases the activity of the catalyst. More hydrogen imply shorter chain and higher MFR.

Molecular Weight. *Polymer vs. MFR.* Polymer chain length (or molecular weight) is directly related to MFR. Laboratory work has shown the relationship to be closely approximated by the following formula:

$$\log MW = -0.2773 \times \log MFR + 7.7243 (r^2 = 0.9780)."$$

Thus, based on evidence provided by R. Lieberman correlation between Viscosity and MFR is proper, known and established.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan M. Nutter whose telephone number is 571-272-1076. The examiner can normally be reached on 9:30 a.m.-6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nathan M. Nutter/
Primary Examiner, Art Unit 1796

nmn

2 June 2010